

## ABSTRACT

A system and method for noise cancellation with noise ramp tracking in the presence of severe or ramping acoustic noise. The system conducts an estimation of the noise level in the input signal and modifies the signal based upon this noise estimate. A windowed Fourier transform is performed upon the input speech signal and an estimation of a histogram of the frequency magnitudes of the noise level and other related parameters is generated and used to compute a spectral gain function that is applied to components of the Fourier transform of the input speech signal. The enhanced components of the Fourier transform are processed by an inverse Fourier transform in order to reconstruct a noise reduced speech signal.